

REMARKS

This Amendment is in response to the Office Action mailed March 28, 2005. In the Office Action the Examiner rejected all claims. With this Amendment claims 15 and 20 are amended, and the remaining claims are unchanged. Reconsideration and withdrawal of the rejections are respectfully request in due of the following remarks.

In item two of the Office Action the Examiner objected to claim 15. With this Amendment claim 15 is amended in accordance with the Examiner's request. Reconsideration and withdrawal of the objection are respectfully requested.

In item four of the Office Action the Examiner rejected Claims 1, 2, 4-8, 10, 11 and 14-20 under 35 U.S.C § 103(a) as being unpatentable over Anderson, III et al., U.S. patent number 6,433,706B1 in view of Gerber, U.S. Patent number 5,568,406. The Applicant has reviewed the cited references, and must respectfully disagree with the Examiner's assertion.

With respect to the Anderson III et al. reference, U.S. Patent 6,433,706, it is directed to a system that is capable of finding a license plate image, determining the license plate number, and comparing that number with a database. However, the Anderson III reference is unable to determine if there is a discrepancy with the information in the database and the vehicle displaying that license plate number. In fact, the Anderson III reference states the character strings of three or less characters are ignored during processing. By ignoring character strings of three or less characters, the system of the Anderson III reference would not decipher strings that are useful in identifying makes and models of vehicles. For example, the Anderson III reference ignores a string "KIA", or a string "V70" which can be useful in determining, automatically, additional information. Further, the Anderson III reference only considers character strengths as

license plates, and not other information. Finally, while the Anderson III reference preferably uses color images, these are used for the purpose of contrast. Color is not used as a component of the comparison in determining in the validity of the license plate number. In fact, the Anderson III reference does not consider the validity of the license plate at all, it only determines if the vehicle or owner of the vehicle is cause for concern based on the determined license plate. The officer is then required to visually compare the data related to the vehicle with the vehicle captured by the image.

The Examiner then indicated that the Gerber reference, U.S. Patent No. 5,568,406, provides the additional features of the claims that are not disclosed or taught by the Anderson III reference. The Examiner indicated that it would have been obvious to one skilled in the art to combine the two references. The Applicant respectfully disagrees.

Gerber features a system for identifying a vehicle while the vehicle is on the road. Gerber makes use of a series of stationary cameras that are at a fixed-distance from a roadway surface and from each other. During the operation of the system of Gerber, the cameras are used in conjunction with a device for determining the speed of the vehicle between the two fixed points as well as the length of the subject vehicle. Gerber also discloses that the distance between the two fixed points should be such that a vehicle should not breach both fixed points at the same time. The specification of Gerber describes that the speed of the vehicle is then calculated based upon the timing difference between when the front of the car breaches the first sensor and the time when the car breaches the second sensor. Based on the determined speed, the length is determined based upon the time the sensor is interrupted. A second embodiment disclosed in the Gerber reference uses a series of cameras or other sensors in a roadbed way to measure the length of the vehicle in stopped or slow traffic.

Based on the number of sensors/cameras that are broken the length of the vehicle is calculated.

Once the length of the vehicle has been determined a database is searched to identify a number of vehicles to which the measured vehicle could be (by make and model). This information is then used to determine if the identified vehicle length fits with the information related to the length of the vehicle assigned the identified license plate.

However, Gerber also ignores certain information or information provided by the cameras. In particular, Gerber discloses ignoring those images or vehicles where the camera can not determine a match between at least one front and at least one rear license plate image. See columns 4 lines 30-61. This limitation disclosed in the Gerber reference renders the system unusable in over 20 states in the United States as well as a number of providences in Canada where the owners of vehicles are not required to display a front license plate. (e.g. Louisiana, and Quebec), or in situations where the driver has remove the front license plate. This requirement of the system in Gerber renders it unusable on a moving vehicle as it is near impossible for a single camera to obtain both a front and a rear license plate image of the target vehicle. Further, the system of Gerber can easily be confused by souvenir plates that are often displayed on the front of vehicles. These plates are often purchased at tourist sites, and mimic a real license plate while not being a real license plate. Also the system of Gerber will ignore the situation where a vehicle displays a different front and rear license plate, or displays two or more license plates as is common for tractor trailers or commercial busses.

Furthermore, there is no teaching or suggestion in the Gerber reference that the system disclosed could be placed on a moving vehicle such as the law enforcement vehicle or other vehicles claimed in the claims or any other non-fixed object. One

skilled in the art would consider the teachings of Gerber inappropriate to apply on a moving vehicle, or other arrangement where the length detection system could not guarantee an accurate result. Gerber does not disclose, teach or suggest using any other parameter as the primary information, due to the large numbers of vehicles sharing common widths or color. In order to modify the teachings of Gerber to be used on a moving vehicle or in a non-fixed location significant and/or undue experimentation would be needed. For example, Gerber teaches that the cameras are placed 22 feet apart. By its own teachings this is almost physically impossible to achieve on a vehicle, as most vehicles overall length is less the 22 feet. Further the width of vehicles is restricted to 8 ½ feet. Thus, the placement of the cameras and light beams in Gerber is not feasible on a vehicle. Further, even if Gerber could be modified to work on a law enforcement vehicle it would be necessary to know the angle of the vehicle relative to the target vehicle to determine both the speed of the vehicle and the length of the target vehicle. As the angle relative to the target vehicle change the determination of the length and distance between the cameras and sensors can vary to a point that the system cannot accurately determine the length of the vehicle. Without the length determination feature of Gerber simply has too many possibilities to analyze to determine if there is a vehicle mismatched.

With respect to color as additional information, Gerber does not teach or suggest using the camera to determine the color of the vehicle. Gerber discloses using a series of photo resistive sensors with color filters. The color is then determined based upon the output of the photo resistive sensors as timed by the laser beam. Thus Gerber does not teach or suggest using the camera to obtain the color of the vehicle.

With respect to the pattern matching as additional information of Gerber, it is again determined based on knowing


the distance between the camera and the vehicle as well as the angles involved. If these features are not know, pattern matching would not work because of distortions to the image. Further, Gerber again requires two images front and back because of similarities in vehicles from the same manufacturer.

Thus, it is respectfully submitted that one skilled in the art would not consider the Gerber reference applicable to a moving system, because the features, and advantages of the Gerber system cannot work to any degree of certainty when moved. Therefore, the applicant submits that the combination of Gerber and Anderson III does not teach or suggest the feature of the clamed invention. Furthermore, the additional cited references used in the rejections of items 5 and 6 do not teach or suggest the features of the claims as used on a moveable vehicle. Therefore it is believed that claims 1-20 are allowable over the prior art of record. Reconsideration and allowance are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: 
Nathan M. Rau, Reg. No. 45,466
Suite 1400 - International Centre
900 Second Avenue South
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222 Fax: (612) 334-3312

NMR/jmt